

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

**MORPHOMETRIC:**

Lake: WHEELWRIGHT POND	Lake Area (ha):	40.02
Town: LEE	Maximum depth (m):	9.4
County: Strafford	Mean depth (m):	3.6
River Basin: Coastal	Volume (m <sup>3</sup> ):	1449500
Latitude: 43°08'15" N	Relative depth:	1.3
Longitude: 71°00'29" W	Shore configuration:	1.92
Elevation (ft): 131	Areal water load (m/yr):	5.25
Shore length (m): 4300	Flushing rate (yr <sup>-1</sup> ):	1.40
Watershed area (ha): 440.3	P retention coeff.:	0.65
% watershed ponded: 0.1	Lake type:	natural

**BIOLOGICAL:**

17 January 1994

8 July 1993

DOM. PHYTOPLANKTON (% TOTAL)	#1	RHIZOSOLENIA 35%	DINOBRYON 40%
	#2	ASTERIONELLA 20%	ASTERIONELLA 30%
	#3	DINOBRYON 20%	
PHYTOPLANKTON ABUNDANCE (cells/mL)			520
CHLOROPHYLL-A (µg/L)			6.40
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 33%	NAUPLIUS LARVA 35%
	#2	NAUPLIUS LARVA 21%	KELICOTTIA 19%
	#3		
ROTIFERS/LITER		37	76
MICROCRUSTACEA/LITER		15	112
ZOOPLANKTON ABUNDANCE (#/L)		52	202
VASCULAR PLANT ABUNDANCE			Common/Abun
SECCHI DISK TRANSPARENCY (m)			4.4
BOTTOM DISSOLVED OXYGEN (mg/L)		8.8	0.4
BACTERIA (E. coli, #/100 ml)	#1		< 10
	#2		< 10
	#3		

**SUMMER THERMAL STRATIFICATION:**

stratified

Depth of thermocline (m):	4.0
Hypolimnion volume (m <sup>3</sup> ):	104500
Anoxic volume (m <sup>3</sup> ):	182500

**CHEMICAL:**

Lake: WHEELWRIGHT POND

Town: LEE

	17 January 1994		8 July 1993		
DEPTH (m)	3.0	6.0	1.0	4.0	8.0
pH (units)	6.7	6.6	7.4	7.4	6.8
A.N.C. (Alkalinity)	15.0	15.8	15.7	15.9	22.5
NITRATE NITROGEN	0.07	0.08	< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.30	0.30	0.18	0.14	0.31
TOTAL PHOSPHORUS	0.011	0.010	0.009	0.012	0.047
CONDUCTIVITY ( $\mu$ mhos/cm)	114.5	117.5	110.6	110.9	122.6
APPARENT COLOR (cpu)			26	30	80
MAGNESIUM			1.28		
CALCIUM			7.1		
SODIUM			11.4		
POTASSIUM			0.96		
CHLORIDE	19	20	19		18
SULFATE	9	9	6		5
TN : TP	34	38	20		7
CALCITE SATURATION INDEX			1.9		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1993**

D.O. S.D. PLANT CHL TOTAL CLASS

4	2	4	1	11	Meso.
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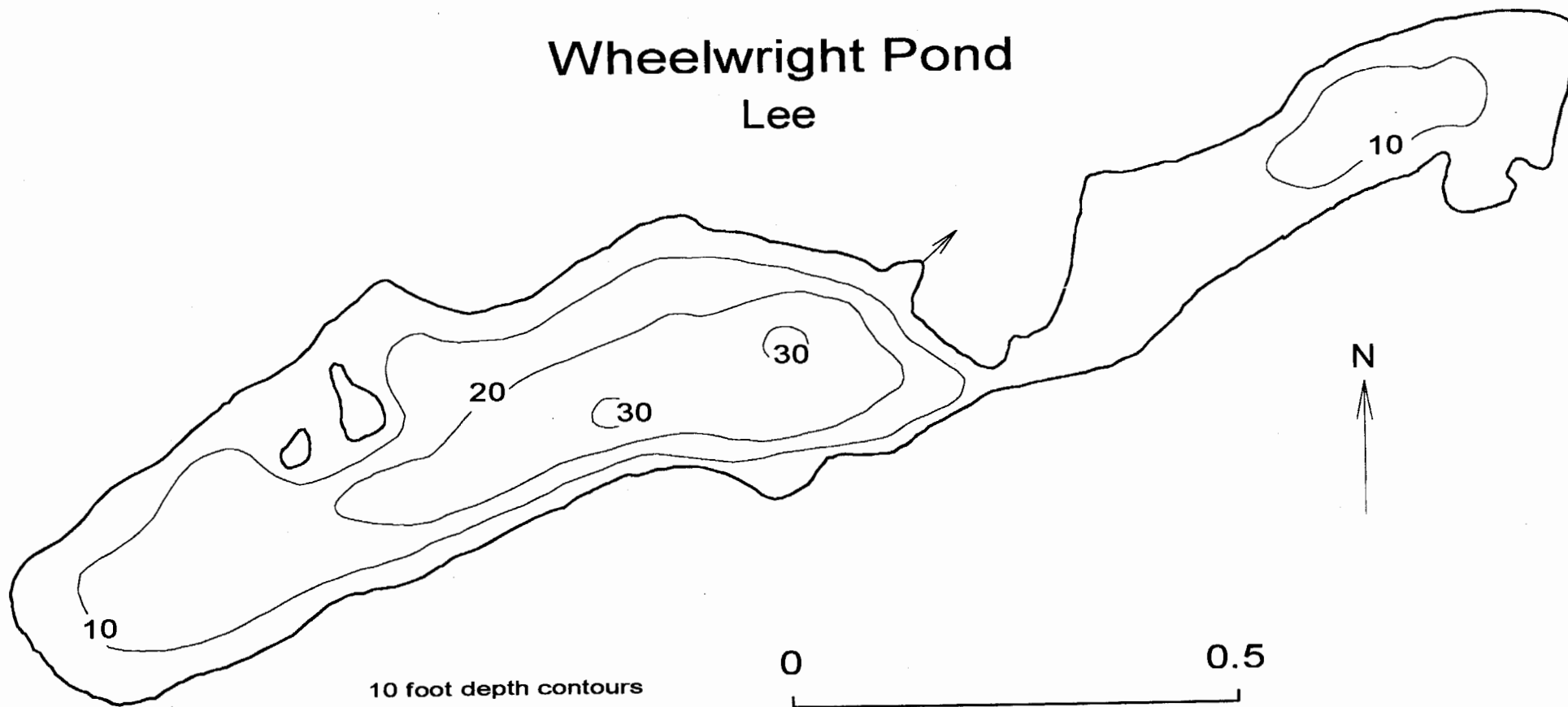
**COMMENTS:**

1. This pond was previously surveyed and classified in 1979. It was rated eutrophic at that time. Algae and phosphorus levels were somewhat lower and water clarity higher in 1993, but the changes were probably within natural seasonal and yearly variations. More frequent sampling in a volunteer monitoring program is needed to determine if the indicated trend in water quality improvement is real.
2. Chroomonas (30%) and Cryptomonas (15%) were the dominant genera of wholewater phytoplankton.

# Wheelwright Pond

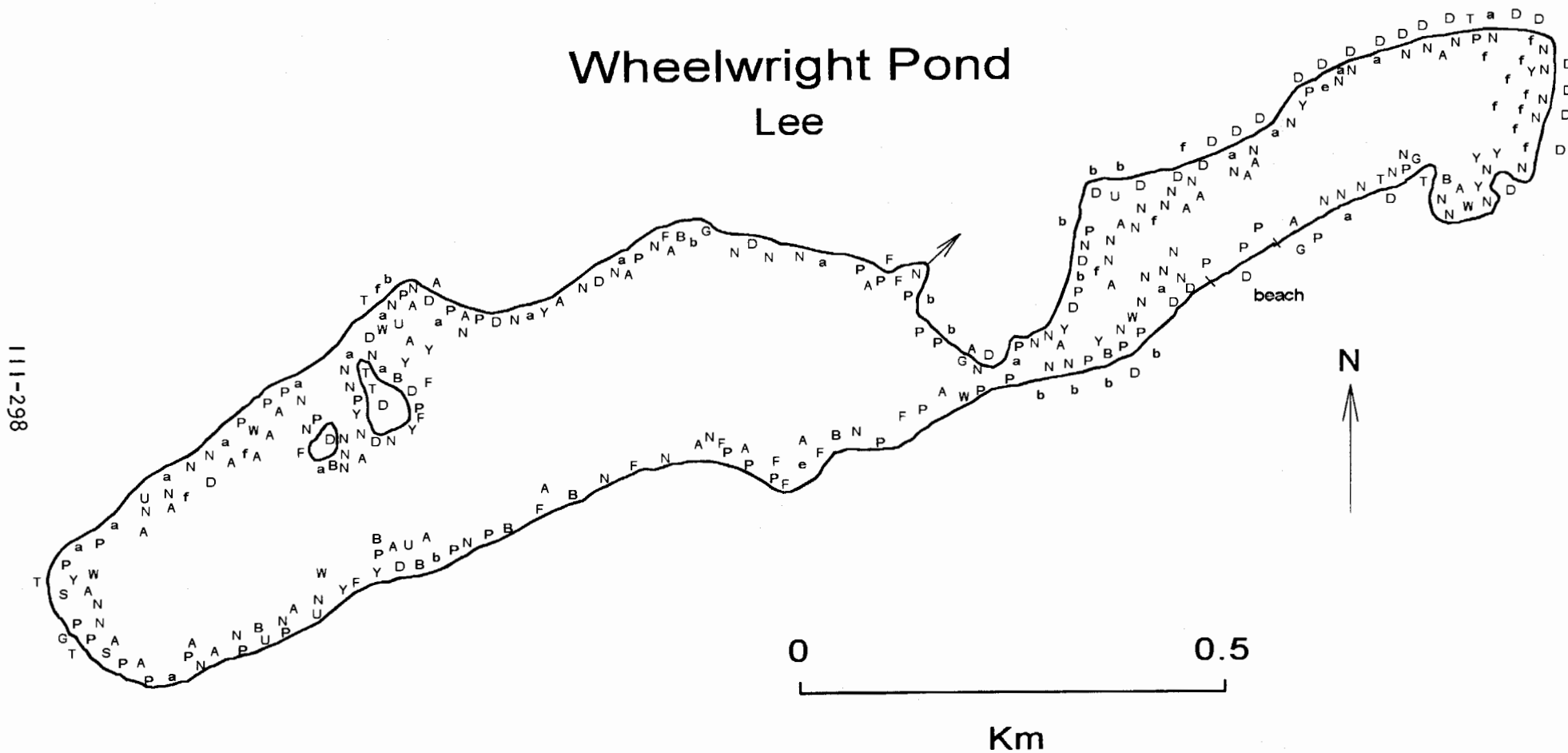
Lee

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# Wheelwright Pond Lee



## AQUATIC PLANT SURVEY

LAKE: WHEELWRIGHT POND

TOWN: LEE

DATE: 07/08/93

[illegible]

**OVERALL ABUNDANCE:** Common/Abun

**GENERAL OBSERVATIONS:**

1. Large floating mats of filamentous green algae were abundant in the eastern end of the pond.